



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 864,481	05 24 2001	Barry Cavanaugh	EMC01-17(01014)	2991

7590

06 06 2003

David E. Huang, Esq.
CHAPIN & HUANG, L.L.C.
Westborough Office Park
1700 West Park Drive
Westborough, MA 01581

EXAMINER

NINO, ADOLFO

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 06 06 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,481

Applicant(s)

CAVANAUGH ET AL.

Examiner

Adolfo Nino

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 7, 14, 15, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Drawings

The drawings are objected to because in fig. 2, reference number "30" should be ---32---. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 1, in the title, "METHODS AND APPARATUS..." should be ----
APPARATUS AND METHOD...---

Page 10, line 4, "22", second occurrence, should be ---32---.

Appropriate correction is required.

Claim Objections

Claims 8, 15 and 16 are objected to because of the following informalities:

Claim 8, lines 6-7, "a power supply" should be ---the power supply---.

Claim 8, line 9, before "multiple backplanes" insert ---the---.

Claim 15, line 2, "to separates" should be ---separating---.

Claim 16, lines 3, 7 and 8, "a power supply" should be ---the power supply---.

Claim 16, line 3, "which couples to a power supply" is redundant with lines 7-8.

Claim 16, line 4, "which couples simultaneously to the multiple backplanes" is redundant with lines 9-10.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-13 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Duke et al. (US 5,011,421).

Regarding claim 1, Duke et al. disclose a bus bar assembly (fig. 2), comprising: a power supply member (1 in fig. 2) that couples to a power supply (col. 3, lines 14-16); a backplane member (40) that couples simultaneously to multiple backplanes (51, 53), the backplane member (40) defining multiple rows of holes (not marked, but it would be where bolts 55 are located), each row of holes including at least two holes (fig. 2); and a set of fasteners (55) that fasten the power supply member (1) to the backplane member (40) in order to provide a conductive path between the power supply and the multiple backplanes.

Regarding claim 2, Duke et al. disclose the bus bar assembly (fig. 2) of claim 1 wherein the backplane member (40) defines, as the multiple rows of holes, an N x M array of holes, and wherein each of N and M are positive integers greater than or equal to two (fig. 2).

Regarding claim 3, Duke et al. disclose the bus bar assembly (fig. 2) of claim 2 wherein the set of fasteners (55) insert through a row of holes defined by the power supply member (1) and one of N rows of M holes in the N x M array of holes defined by the backplane member (fig. 2).

Regarding claim 4, Duke et al. disclose the bus bar assembly (fig. 2) of claim 1 wherein the backplane member (40) defines each of the multiple rows of holes in a substantially horizontal direction (fig. 2).

Regarding claim 5, Duke et al. disclose the bus bar assembly (fig. 2) of claim 1 wherein the power supply member (1) includes: a first end portion (23 in fig. 1) that couples to the power supply (col. 3, lines 39-42); and a second end portion (3 in fig. 1) that fastens to the backplane member (where bolts 55 are located).

Regarding claim 6, Duke et al. disclose the bus bar assembly (fig. 2) of claim 5 wherein the power supply member (1) further includes: an intermediate portion (17 in fig. 1) that connects the first (23) and second end (3) portions; wherein the intermediate portion (17) extends in a substantially vertical direction (fig. 1); and wherein the second end portion (3) that fastens to the backplane member (40 in fig. 2) extends in a substantially horizontal direction (figs. 1, 2).

Regarding claim 8, Duke et al. disclose an electronic system (fig. 2), comprising: a power supply (not shown, col. 3, lines 39-42); multiple backplanes (51, 53 in fig. 2); and a bus bar assembly (1) electrically interconnected between the power supply (col. 3, lines 39-42) and the multiple backplanes (51, 53), the bus bar assembly (1) including: a power supply member (1) that couples to a power supply (col. 3, lines 39-42); a

Art Unit: 2831

backplane member (40) that couples simultaneously to multiple backplanes (51, 53), the backplane member (40) defining multiple rows of holes (not marked, but it would be where bolts 55 are located), each row, of holes including at least two holes (fig. 2); and a set of fasteners (55) that fasten the power supply member to the backplane member (fig. 2) in order to provide a conductive path between the power supply and the multiple backplanes.

Regarding claim 9, Duke et al. disclose the electronic system (fig. 2) of claim 8 wherein the backplane member (40) of the bus bar assembly defines, as the multiple rows of holes, an $N \times M$ array of holes, and wherein each of N and M are positive integers greater than or equal to two (fig. 2).

Regarding claim 10, Duke et al. disclose the electronic system (fig. 2) of claim 9 wherein the set of fasteners (55) of the bus bar assembly insert through a row of holes defined by the power supply member and one of N rows of M holes in the $N \times M$ array of holes defined by the backplane member (fig. 2).

Regarding claim 11, Duke et al. disclose the electronic system (fig. 2) of claim 8 wherein the backplane member (40) of the bus bar assembly defines each of the multiple rows of holes in a substantially horizontal direction (fig. 2).

Regarding claim 12, Duke et al. disclose the electronic system (fig. 2) of claim 8 wherein the power supply member (1) of the bus bar assembly includes: a first end portion (23 in fig. 1) that couples to the power supply (col. 3, lines 39-42); and a second end portion (3 in fig. 1) that fastens to the backplane member (fig. 2).

Regarding claim 13, Duke et al. disclose the electronic system (fig. 2) of claim 12 wherein the power supply member (1) of the bus bar assembly further includes: an intermediate portion (17 in fig. 1) that connects the first and second end portions (fig. 1); wherein the intermediate portion extends in a substantially vertical direction (fig. 1); and wherein the second end portion (3) that fastens to the backplane member extends in a substantially horizontal direction (fig. 2).

Regarding claim 16, Duke et al. disclose a method for electrically connecting a power supply (not shown, col. 3, lines 39-42) to multiple backplanes (51, 53), the method comprising the steps of: fastening a power supply member (1), which couples to a power supply (col. 3, lines 39-42), to a backplane member (40), which couples simultaneously to the multiple backplanes (51, 53), using a set of fasteners (55) in order to form a bus bar assembly, the backplane member (40) defining multiple rows of holes (not shown, but where fasteners 55 are located), each row of holes including at least two holes (fig. 2); coupling the power supply member (1) of the bus bar assembly to a power supply (col. 3, lines 39-42); and coupling the backplane member (40) of the bus bar assembly simultaneously to the multiple backplanes (51, 53) in order to provide a conductive path between the power supply and the multiple backplanes.

Regarding claim 17, Duke et al. disclose the method of claim 16 wherein the backplane member (40) defines, as the multiple rows of holes an $N \times M$ array of holes, wherein each of N and M are positive integers greater than or equal to two (fig. 2); and wherein the step of fastening includes the step of: inserting the set of fasteners through

one of the multiple N rows of M holes defined by the backplane member and through the power supply member (fig. 2, fasteners 55).

Regarding claim 18, Duke et al. disclose the method of claim 16 wherein the power supply member (1) includes a first end portion (23 in fig. 1) that couples to the power supply (col. 3, lines 39-42), and a second end portion (3 in fig. 1) that fastens to the backplane member (40); and wherein the step of fastening includes the step of: attaching the second end portion (3) of the power supply member (1) to the backplane member (40) using the set of fasteners (55 in fig. 2).

Allowable Subject Matter

Claims 7, 14, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 15 would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 7, 14 and 15, the prior art of record, alone or in combination, does not disclose nor teach the limitation therein of "wherein the intermediate portion is configured to couple to a side of an electronic equipment cabinet" in combination with the other claim limitations.

With respect to claims 19 and 20, the prior art of record, alone or in combination, does not disclose nor teach the limitation therein of "wherein the method further comprises the step of: coupling the intermediate portion of the power supply member to a side of an electronic equipment cabinet " in combination with the other claim limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wagener (US 6,506,068 B2) discloses a kit for a bus bar system. Inniss et al. (US 6,445,571 B1) disclose a combined dc/data bus. Walker et al. (US 5,949,641) disclose a mounting arrangement. Chauquet (US 5,749,671) discloses a bus bar assembly. Rowe (US 5,157,584) discloses a power distribution apparatus. Kovatch et al. (US 4,121,276) disclose an electrical switchboard apparatus. Coles et al. (US 4,079,439) disclose a load center. Olashaw (US 3,349,291) discloses a prefabricated switchboard construction. Ellegood (US 2,997,627) discloses a distribution switchboard.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (703) 305-1071. The examiner can normally be reached on M-F (7:30-5:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (703) 308-3682. The fax phone

Art Unit: 2831

numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AN
June 1, 2003

 6/2/03
DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800